

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP) RENEWAL**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
and
CITY OF INDIANAPOLIS
OFFICE OF ENVIRONMENTAL SERVICES**

**Dow AgroSciences
9330 Zionsville Road
Indianapolis, Indiana 46268**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F097-15205-00259	
Issued by: Original signed by John B. Chavez	Issuance Date: 6-24-02
John B. Chavez, Administrator Office of Environmental Services	Expiration Date: 6-24-07

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and the City of Indianapolis Office of Environmental Services (OES). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates an office and research and development facility which operates eight (8) natural gas-fired boilers for space heat and for hot water. Dow AgroSciences also operates two (2) emergency diesel-fired generators and a soil pulverizer.

Authorized individual:	Norman Smiley, R & D Facility Manager
Source Address:	9330 Zionsville Road, Indianapolis, IN 46268
Mailing Address:	9330 Zionsville Road, Indianapolis, IN 46268
SIC Code:	2879
Source Location Status:	Marion
County Status:	Attainment, Maintenance Attainment or unclassifiable for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source under PSD

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

- (1) Emissions Unit ID 5309-01; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 29.3 MMBtu/hr. Installation date was December 1991.
- (2) Emissions Unit ID 5309-02; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 29.3 MMBtu/hr. Installation date was December 1991.
- (3) Emissions Unit ID 5309-03; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.
- (4) Emissions Unit ID 5309-04; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.
- (5) Emissions Unit ID 5309-05; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.
- (6) Emissions Unit ID 5309-06; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.

- (7) Emissions Unit ID 5309-07; Stack/Vent ID No. 308-1. One (1) natural gas-fired Bryan Steam Corporation Boiler. Maximum rated heat input capacity is 10.5 MMBtu/hr. Installation date was December 1993.
- (8) Emissions Unit ID 5309-08; Stack/Vent ID No. 308-1. One (1) natural gas-fired Bryan Steam Corporation Boiler. Maximum rated heat input capacity is 10.5 MMBtu/hr. Installation date was December 1993.
- (9) Emissions Unit ID 5309-09; Stack/Vent ID No. 306-2. One (1) diesel fuel fired 1000 kW/hr electrical backup generator. Maximum rated heat input capacity is 9.38 MMBtu/hr and 3,686 HP/hr. Installation date was December 1993.
- (10) Emissions Unit ID 5309-10; Stack/Vent ID No. 308-2. One (1) diesel fuel fired 1000 kW/hr electrical backup generator. Maximum rated heat input capacity is 9.38 MMBtu/hr and 3,686 HP/hr. Installation date was December 1993.
- (11) Emissions Unit ID 310-1. One CBT Wearparts Soil Pulverizer, with a maximum operating capacity of 40 ton/hr installed in 1999.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

- (1) Emissions Unit ID 301-DC. Research and development of formulations for plant and animal herbicide and pesticide products. This emission unit includes a batch mixer, fluid bed dryer, and mills. Particulate Matter is controlled by a baghouse identified as control equipment ID 301-DC.
- (2) natural gas-fired combustion sources with heat input equal to, or less than, 10 MMBTU per hour.
- (3) storage tanks with capacities less than, or equal to, 1,000 gallons and annual throughputs less than 12,000 gallons.
- (4) closed loop heating and cooling systems.
- (5) noncontact cooling tower systems with forced and induced draft not regulated under a NESHAP.
- (6) replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (7) blowdown for any of the following: sight glass; boiler; compressor; pump; and cooling tower.
- (8) on-site fire and emergency response training approved by the department.
- (9) filter or coalescer media change out.
- (10) a laboratory as defined in 326 IAC 2-7-1(20)(C).
- (11) soil handling associated with greenhouse research and development.

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and the City of Indianapolis Office of Environmental Services (OES) to renew a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permit Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
- (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted
- by this permit.
- (b) All previous registrations and permits are superseded by this permit.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

B.2 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

B.3 Permit Term [326 IAC 2-8-4(2)]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.4 Enforceability [326 IAC 2-8-6]

(a) Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM and OES, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

(b) Unless otherwise stated, all terms and conditions in this permit that are local requirements, including any provisions designed to limit the source's potential to emit, are enforceable by OES.

B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.6 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5(a)(4)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall furnish to IDEM, OAQ, and OES within a reasonable time, any information that IDEM, OAQ, and/or OES may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ and OES copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality.[326 IAC 2-8-4(5)(E)]
- (c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ and/or OES may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
 - (1) Enforcement action;
 - (2) Permit termination, revocation and reissuance, or modification; and
 - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in condition B, Emergency Provisions.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and/or OES on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, and/or OES may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs), including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ and/or OES upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ and/or OES. IDEM, OAQ and/or OES may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or OES makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner and/or OES within a reasonable time.

B.14 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ or OES, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

IDEM, OAQ

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section)

or,

Telephone No.: 317-233-5674 (ask for Compliance Section)

Facsimile No.: 317-233-5967

OES

Telephone No.: 317/327-2234

Facsimile No.: 317/327-2274

Failure to notify IDEM, OAQ or OES, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ and/or OES may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ or OES by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality (Data Compliance Section)
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ or OES determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ and/or OES to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ or OES at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ or OES may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and/or OES and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

(1) A timely renewal application is one that is:

- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and/or OES on or before the date it is due.

(2) If IDEM, OAQ and/or OES upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ and/or OES takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ and OES any additional information identified as needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ and OES in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (d) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ and/or OES, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable;
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-8-4(3)]

C.8 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and/or OES not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.10 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing performed required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

C.12 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature, flow rate, or pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.13 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68; or
- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.15 Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]

- (a) The Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. This statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6-3 and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8). The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

The emission statement does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and/or OES on or before the date it is due.

C.16 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or OES makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or OES within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality (Compliance Data Section)
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

City of Indianapolis
Office of Environmental Services
Air Quality Management Section
2700 South Belmont Avenue
Indianapolis Indiana 46221-2097

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ and/or OES on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.18 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (1) Emissions Unit ID 5309-01; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 29.3 MMBtu/hr. Installation date was December 1991.
- (2) Emissions Unit ID 5309-02; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 29.3 MMBtu/hr. Installation date was December 1991.
- (3) Emissions Unit ID 5309-03; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.
- (4) Emissions Unit ID 5309-04; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.
- (5) Emissions Unit ID 5309-05; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.
- (6) Emissions Unit ID 5309-06; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.
- (7) Emissions Unit ID 5309-07; Stack/Vent ID No. 308-1. One (1) natural gas-fired Bryan Steam Corporation Boiler. Maximum rated heat input capacity is 10.5 MMBtu/hr. Installation date was December 1993.
- (8) Emissions Unit ID 5309-08; Stack/Vent ID No. 308-1. One (1) natural gas-fired Bryan Steam Corporation Boiler. Maximum rated heat input capacity is 10.5 MMBtu/hr. Installation date was December 1993.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A] [40 CFR Part 60, Subpart Dc]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 60, Subpart Dc.

The provisions of 40 CFR Part 60, Subpart Dc, which are incorporated by reference in 326 IAC 12-1, apply to the facilities described in this section.

D.1.2 Oxides of Nitrogen (NO_x) [326 IAC 2-8-4(1)]

The Permittee shall limit the amount of natural gas combusted in emission units 01 through 08 to less than 1408.8 million cubic feet per 12 consecutive month period. This usage limit is required to limit the potential to emit of emission units 01 through 08 of NO_x to 70.44 tons per 12 month consecutive period. This limit and the limit in Condition D.2.1 are required to limit NO_x such that the 326 IAC 2-7 (Part 70 Permit Program) does not apply.

D.1.3 Particulate Matter (PM) [326 IAC 6-2-1]

326 IAC 6-2-1 (Particulate Emissions Limitations for Sources of Indirect Heating) applies to these eight (8) boilers. The limitations are:

- (a) PM emissions from Emissions Unit Nos. 5309-01 through -06 boilers shall each not exceed 0.28 lb/MMBTU based on a maximum heat input capacity of 192.6 MMBtu, per the following calculation, pursuant to 326 IAC 6-2-4(a):

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where: Pt = Pounds of particulate matter emitted per million emitted per million Btu(lbs/mmBtu)heat input

Q=Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input

- (b) PM emissions from Emissions Unit Nos. 5309-07 and 5309-08 boilers shall each not exceed 0.27 lb/MMBTU based on a maximum heat input capacity of 213.6 MMBtu per the following calculation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.4 Record Keeping Requirements

To document compliance with preceding condition D.1.2 and 40 CFR Subpart Dc the permittee shall;

- a) maintain records of the amount of natural gas consumed monthly.
- b) all records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.5 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Condition D.1.2 and 40 CFR Subpart Dc shall be submitted to the addresses listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.
- (b) In addition to the above, the Permittee shall certify, on the form provided (or its equivalent), that natural gas was fired in the boiler at all times during the report period. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (i) Emissions Unit ID 5309-09; Stack/Vent ID No. 306-2. One (1) diesel fuel fired 1000 kW/hr electrical backup generator. Maximum rated heat input capacity is 9.38 MMBtu/hr and 3,686 HP/hr. Installation date was December 1993.
- (j) Emissions Unit ID 5309-10; Stack/Vent ID No. 308-2. One (1) diesel fuel fired 1000 kW/hr electrical backup generator. Maximum rated heat input capacity is 9.38 MMBtu/hr and 3,686 HP/hr. Installation date was December 1993.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Oxides of Nitrogen (NO_x) [326 IAC 2-8-4(1)]

The permittee shall limit the amount of diesel fuel combusted in emitting units 09 and 10 to less than 66,100 gallons per 12 consecutive month period. This usage limit is required to limit the potential to emit of emission units 09 and 10 of NO_x to 15 tons per 12 consecutive month period. This limit and the limit in Condition D.1.2 are required to limit NO_x such that the requirements of 326 IAC 2-7(Part 70 Program) shall not apply.

D.2.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.3 Record Keeping Requirements

To document compliance with Condition D.2.1 the permittee shall maintain records of the amount of diesel fuel combusted monthly. This amount shall not exceed 66,100 gallons per 12 consecutive month period.

D.2.4 Reporting Requirements

A quarterly summary, certified by the source's responsible official, of the information to document compliance with Condition D.2.1 shall be submitted to the addresses listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (k) Emissions Unit ID 310-1. One CBT Wearparts Soil Pulverizer, with a maximum operating capacity of 40 ton/hr installed in 1999.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the PM emission rate from Emissions Unit ID 310-1 shall not exceed the 42.5 pound per hour emission rate, when P = 40 tons per hour, established as E in the following formula:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.3.2 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility.

SECTION D.4

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activity

- (1) Emissions Unit ID 301-DC. Research and development of formulations for plant and animal herbicide and pesticide products. This emission unit includes a batch mixer, fluid bed dryer, and mills. Particulate Matter is controlled by a baghouse identified as control equipment ID 301-DC.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.4.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the PM emission rate from Emissions Unit ID 301-DC shall not exceed the 2.02 pound per hour emission rate, when P = 0.35 tons per hour, established as E in the following formula:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where

E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
and
CITY OF INDIANAPOLIS
OFFICE of ENVIRONMENTAL SERVICES**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Dow AgroSciences
Source Address: 9330 Zionsville Road, Indianapolis, IN 46268
Mailing Address: 9330 Zionsville Road, Indianapolis, IN 46268
FESOP No.: F097-15205-00259

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- ☐ Annual Compliance Certification Letter
- ☐ Test Result (specify) _____
- ☐ Report (specify) _____
- ☐ Notification (specify) _____
- ☐ Affidavit (specify) _____
- ☐ Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967**

**CITY OF INDIANAPOLIS
OFFICE of ENVIRONMENTAL SERVICES
DATA COMPLIANCE**

**2700 South Belmont Avenue
Indianapolis, Indiana 46221
Phone: 317-327-2234
Fax: 317-327-2274**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Dow AgroSciences
Source Address: 9330 Zionsville Road, Indianapolis, IN 46268
Mailing Address: 9339 Zionsville Road, Indianapolis, IN 46268
FESOP No.: F097-15205-00259

This form consists of 2 pages

Page 1 of 2

- ☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**CITY OF INDIANAPOLIS
OFFICE of ENVIRONMENTAL SERVICES**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
NATURAL GAS FIRED BOILER CERTIFICATION**

Source Name: Dow AgroSciences
Source Address: 9330 Zionsville Road, Indianapolis, IN 46268
Mailing Address: 9330 Zionsville Road, Indianapolis, IN 46268
FESOP No.: F097-15205-00259

**This certification shall be included when submitting monitoring, testing reports/results
or other documents as required by this permit.**

Report period

Beginning: _____

Ending: _____

Boiler Affected

Alternate Fuel

Days burning alternate fuel
From To

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
CITY OF INDIANAPOLIS
OFFICE of ENVIRONMENTAL SERVICES

FESOP Quarterly Report

Source Name: Dow AgroSciences
Source Address: 9330 Zionsville Road, Indianapolis, IN 46268
Mailing Address: 9330 Zionsville Road, Indianapolis, IN 46268
FESOP No.: 0970-15205-00259

Facility: **Emission Units 5309-01 through 5309-08 (Boilers)**
Parameter: Fuel Usage (NOx limit)
Limit: 1408.8 million cubic feet per 12 month rolling sum

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- ☐ No deviation occurred in this quarter.
- ☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
CITY OF INDIANAPOLIS
OFFICE of ENVIRONMENTAL SERVICES**

FESOP Quarterly Report

Source Name: Dow AgroSciences
Source Address: 9330 Zionsville Road, Indianapolis, IN 46268
Mailing Address: 9330 Zionsville Road, Indianapolis, IN 46268
FESOP No.: 0970-15205-00259

Facility: **Emission Units 5309-09 and 5309-10 (Emergency Generators)**
Parameter: Diesel Fuel Limit (NOx)
Limit: 66,100 gallons per 12 month rolling sum

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

- ☐ No deviation occurred in this quarter.
- ☐ Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
CITY OF INDIANAPOLIS
OFFICE of ENVIRONMENTAL SERVICES**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Dow AgroSciences
Source Address: 9330 Zionsville Road, Indianapolis, IN 46268
Mailing Address: 9330 Zionsville Road, Indianapolis, IN 46268
FESOP No.: F097-15205-00259

Months: _____ to _____ Year: _____

Page 1 of 2

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management
Office of Air Quality
and
City of Indianapolis Office of Environmental Services**

Addendum to the
Technical Support Document for Federally Enforceable State Operating Permit
(FESOP) Renewal

Source Background and Description

Source Name: Dow AgroSciences
Source Location: 9330 Zionsville Road, Indianapolis, IN 46268
County: Marion County
SIC Code: 2879
Operation Permit No.: F097-15205-00259
Permit Reviewer: Amanda Hennessy

On Friday, April 26, 2002, the Office of Air Quality (OAQ) and the Office of Environmental Services (OES) had a notice published in the Indianapolis Star, Indianapolis, Indiana, stating that Dow AgroSciences had applied for a Federally Enforceable State Operating Permit (FESOP) Renewal to operate an office and research and development facility. The notice also stated that OAQ and OES proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed. No comments were received from the source or the public.

OES and OAQ have made the following change to the permit. The TSD will remain as it originally appeared when published. Bolded language has been added; language with a line through it has been deleted.

Title Page

Due to a staff change, the following revision will be made to the permit:

Operation Permit No.: F097-15205-00259	
Issued by: Jodi Perias Kusmar John B. Chavez, Acting Administrator Office of Environmental Services	Issuance Date: Expiration Date:

**Indiana Department of Environmental Management
Office of Air Quality
and
City of Indianapolis
Office of Environmental Services**

Technical Support Document (TSD) for a
Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

Source Name:	Dow AgroSciences
Source Location:	9330 Zionsville Road, Indianapolis, IN 46268
County:	Marion
SIC Code:	2879
Operation Permit No.:	F097-15205-00259
Permit Reviewer:	Amanda Hennessy

The Office of Air Quality (OAQ) and the City of Indianapolis Office of Environmental Services (OES) have reviewed a FESOP renewal application from Dow AgroSciences relating to the operation of an office and research and development facility which operates eight (8) natural gas-fired boilers for space heat and for hot water, two (2) emergency diesel-fired generators and a soil pulverizer. Dow AgroSciences was issued FESOP F097-5617-00259 on August 18, 1997.

Permitted Emission Units and Pollution Control Equipment

- (1) Emissions Unit ID 5309-01; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 29.3 MMBtu/hr. Installation date was December 1991.
- (2) Emissions Unit ID 5309-02; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 29.3 MMBtu/hr. Installation date was December 1991.
- (3) Emissions Unit ID 5309-03; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.
- (4) Emissions Unit ID 5309-04; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.
- (5) Emissions Unit ID 5309-05; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.
- (6) Emissions Unit ID 5309-06; Stack/Vent ID No. 306-1. One (1) natural gas-fired Cleaver Brooks Boiler. Maximum rated heat input capacity is 33.5 MMBtu/hr. Installation date was December 1991.

- (7) Emissions Unit ID 5309-07; Stack/Vent ID No. 308-1. One (1) natural gas-fired Bryan Steam Corporation Boiler. Maximum rated heat input capacity is 10.5 MMBtu/hr. Installation date was December 1993.
- (8) Emissions Unit ID 5309-08; Stack/Vent ID No. 308-1. One (1) natural gas-fired Bryan Steam Corporation Boiler. Maximum rated heat input capacity is 10.5 MMBtu/hr. Installation date was December 1993.
- (9) Emissions Unit ID 5309-09; Stack/Vent ID No. 306-2. One (1) diesel fuel fired 1000 kW/hr electrical backup generator. Maximum rated heat input capacity is 9.38 MMBtu/hr and 3,686 HP/hr. Installation date was December 1993.
- (10) Emissions Unit ID 5309-10; Stack/Vent ID No. 308-2. One (1) diesel fuel fired 1000 kW/hr electrical backup generator. Maximum rated heat input capacity is 9.38 MMBtu/hr and 3,686 HP/hr. Installation date was December 1993.
- (11) Emissions Unit ID 310-1. One CBT Wearparts Soil Pulverizer, with a maximum operating capacity of 40 ton/hr installed in 1999.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (1) Emissions Unit ID 301-DC. Research and development of formulations for plant and animal herbicide and pesticide products. This emission unit includes a batch mixer, fluid bed dryer, and mills. Particulate Matter is controlled by a baghouse identified as control equipment ID 301-DC.
- (2) natural gas-fired combustion sources with heat input equal to, or less than, 10 MMBTU per hour.
- (3) storage tanks with capacities less than, or equal to, 1,000 gallons and annual throughputs less than 12,000 gallons.
- (4) closed loop heating and cooling systems.
- (5) noncontact cooling tower systems with forced and induced draft not regulated under a NESHAP.
- (6) replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (7) blowdown for any of the following: sight glass; boiler; compressor; pump; and cooling tower.
- (8) on-site fire and emergency response training approved by the department.
- (9) filter or coalescer media change out.
- (10) a laboratory as defined in 326 IAC 2-7-1(20)(C).
- (11) soil handling associated with greenhouse research and development.

Existing Approvals

- (a) FESOP 097-5617-00259 issued on August 18, 1997 and expiring on August 18, 2002; and
- (a) Minor Permit Modification MMF 097-10523-00259 issued on January 15, 1999; and
- (c) Administrative Amendment 097-14227-00259 issued on July 31, 2001.

All conditions from previous approvals were incorporated into this FESOP, except:

- (1) Emission unit 310-1, the soil pulverizer was moved from an insignificant activity to a significant activity. The unit has PM emissions greater than 10 tons per year and therefore is not insignificant.
- (2) PTE changed due to a change in AP-42 factors.
- (c) The NO_x limit for all eight boilers has been reduced to 70.44 tons per 12 month rolling sum due to the consideration of the soil pulverizer (and changes in the AP-42 factors for the insignificant activities and emergency generators). The corresponding fuel limit for the boilers has also changed due to the NO_x limit change and due to a change in AP-42 emission factor values. The fuel limit has changed to 1408.8 MMCF per 12 month rolling sum. The previous NO_x limit was 78.55 tons per 12 month rolling sum. The previous fuel limit was 1122.2 Mmcf per 12 month rolling sum.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Administrator that the FESOP Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete FESOP Renewal application for the purposes of this review was received on November 20, 2001. Additional information regarding FESOP limits was received on March 11, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1-7).

In March of 1998, Chapter 1 of AP-42 was updated based on new data. The following emission factor changes were made at that time: PM emission factor changed from 13.7 lb/MMBtu to 7.6 lb/MMBtu, NO_x emission factor changed from 140 lb/MMBtu to 100 lb/MMBtu, VOC emission factor changed from 2.8 lb/MMBtu to 5.5 lb/MMBtu, and CO emission factor changed from 35 lb/MMBtu to 84 lb/MMBtu.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	26.95
PM-10	26.75
SO ₂	3.16
VOC	6.41
CO	84.80
NO _x	120.28

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

Hazardous Air Pollutant	Unrestricted Potential Emissions (tons/yr)
Any single HAP	less than 10
Combined HAPs	less than 25

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of NO_x is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the OES STEPS Summary covering the year 2000.

Pollutant	Actual Emissions (tons/year)
PM	Not Reported
PM-10	0.29
SO ₂	0.07
VOC	0.27
CO	3.21
NO _x	12.87

Potential to Emit After Issuance

The source, issued a FESOP on August 18, 1997, has opted to remain a FESOP source, rather than apply for a Part 70 Operating Permit. The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered enforceable only after issuance of this Federally Enforceable State Operating Permit and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source has constructed new emission units, the source's potential to emit is based on the emission units included in the original FESOP (F097-5617-00259; issued on August 18, 1997), a minor permit modification (MMF097-10523-00259; issued on January 15, 1999), and an administrative amendment (097-14227-00259; issued on July 31, 2001).

	Potential to Emit After Issuance (tons/year)						
Process/emission unit	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Boilers (emission units 5309 01 through 08) ¹	5.35	5.35	0.42	3.87	59.17	70.44	Negligible
Emergency Generators (5309 09 and 10) ²	0.40	0.20	1.80	0.40	4.00	15.00	Negligible
Soil Pulverizer	16.07	16.07	0.83	1.00	2.60	12.22	—
Insignificant Activities	0.10	0.10	0.01	0.07	1.12	1.34	Negligible
Total PTE After Issuance	21.92	21.92	3.06	5.34	66.91	99.00	Negligible

¹ Boiler Limited PTE based on NO_x limit of 70.44 tpy (fuel usage limit of 1408.8 MMCFM per 12 month period) to keep NO_x emissions ≤ 99 tpy.

² Emergency Generator Limited PTE based on a maximum of 500 operation hours each year (fuel usage limit of 66100 gallons per 12 month period).

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	unclassifiable
SO ₂	maintenance attainment
NO ₂	attainment
Ozone	maintenance attainment
CO	maintenance attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone.
- (b) PSD and Emission Offset Requirements
The emissions from this source were reviewed under the requirements of the Prevention of Significant Deterioration (PSD), 326 IAC 2-2, 40 CFR 52.21, and Emission Offset, 326 IAC 2-3.
- (c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed sources under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Federal Rule Applicability

- (a) The eight boilers are subject to the New Source Performance Standard, 326 IAC 12 and 40 CFR 60.48c(g), Subpart Dc, because the boilers have a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr and were constructed after June 9, 1989. Pursuant to 40 CFR 60 Subpart Dc and a USEPA memo dated February 20, 1992, monthly record keeping of the natural gas consumption shall apply to these units.

- (b) The eight boilers are subject to the provisions of 40 CFR 60, Subpart A - General Provisions, except when otherwise specified in 40 CFR 60 Subpart Dc.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

Pursuant to 326 IAC 2-8-4(9), FESOPs must require that the source maintain preventive maintenance plans as described in 326 IAC 1-6-3.

Based on OES's review PMPs are required for the following emission units and any (non voluntary control equipment) control equipment required by OES and IDEM, OAQ in the permit::

- a) Emission units 5309-01 through 5309-08, all natural gas boilers, are not subject to the requirements to prepare and maintain a PMP. The units are subject to the NSPS, Subpart Dc, however, IDEM, OAQ and OES have determined that since the boilers only burn natural gas, the natural gas certification will suffice when burning natural gas and a PMP will not be required.
- (b) Emission units 5309-09 and 5309-10, emergency generators, are subject to the requirement to prepare and maintain a PMP since these units have a condition limiting PTE.
- (c) Emission unit 310-1, the soil pulverizer, is subject to the requirements to prepare and maintain a PMP since the unit is a significant emission unit.
- (d) Emission unit 301-DC is not subject to the requirements to prepare and maintain a PMP since the unit is an insignificant activity.

326 IAC 2-2 (PSD)

The source is not subject to 326 IAC 2-2 (PSD), because it is not one of the 28 listed sources and its unrestricted potential to emit is less than 250 tpy for all air pollutants subject to regulation under the Clean Air Act.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

The source is not subject to 326 IAC 2-4.1(Major Sources of Hazardous Air Pollutants), because the source is not a major source of hazardous air pollutants.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it is located in Marion County and has the potential to emit more than ten (10) tons per year of NO_x. Pursuant to this rule, the owner/operator of the source must submit an emission statement for the source by April 15 of each year. The statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6 and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity

monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

Eight Boilers (Emission Units 5309-01 through 5309-08)

FESOP LIMIT:

As a result of the NO_x emission factor change in AP-42 (see Calculations section) and a correction the following limits have changed:

The fuel usage for the eight (8) boilers shall be limited to 1,408.8 MMCF of natural gas per 12 consecutive month period, rolled on a monthly basis. The following calculation was used to determine fuel usage based upon the limit of 70.44 tons/12 month sum rolling average:

$$\frac{70.44 \text{ tons NO}_x}{\text{yr}} \times \frac{2,000 \text{ lbs NO}_x}{\text{tons NO}_x} \times \frac{\text{MMCF}}{100 \text{ lbs NO}_x} = \frac{1,408.8 \text{ MMCF}}{\text{yr}}$$

By limiting the NO_x emissions from the boilers to 70.44 tons/12 consecutive month period, the resultant CO emissions are limited to 59.17 tons/12 consecutive month:

Boilers \$10 # 100 MMBtu/hr input -

$$\frac{1,408 \text{ MMCF}}{\text{yr}} \times \frac{84 \text{ lbs CO}}{\text{MMCF}} \times \frac{\text{ton CO}}{2,000 \text{ lbs CO}} = \frac{59.17 \text{ tons CO}}{\text{yr}}$$

PARTICULATE MATTER LIMITS

These limits show no change from the original FESOP F097-5617-00259.

Applicability:

Although this source is located in Marion County, these units are not subject to 326 IAC 6-1 (Nonattainment Area Limitations) since the source has potential emissions less than 100 tons per year and actual emissions less than 10 tons per year of particulate matter.

These units are subject to 326 IAC 6-2-4 (Particulate Emissions Limitations for Facilities Constructed after September 21, 1983) because the units are indirect heating sources constructed after September 21, 1983.

Limits:

326 IAC 6-2-4 (Particulate Emissions Limitations for Sources of Indirect Heating)

Pursuant to F097-5617-00259, issued on August 18, 1997, the particulate matter from each of the eight boilers shall be limited by the following:

- (a) PM emissions from Emissions Unit Nos. 5309-01 through -06 boilers shall each not exceed 0.28 lb/MMBTU heat input, per the following calculation, pursuant to 326 IAC 6-2-4(a):

$$Pt = \frac{1.09}{Q^{0.26}} = \frac{1.09}{(29.3+29.3+33.5+33.5+33.5+33.5) \text{ MMBtu}^{0.26}} = \frac{0.2776 \text{ lbs}}{\text{MMBTU}} = \frac{0.28 \text{ lbs}}{\text{MMBTU}};$$

- (b) PM emissions from Emissions Unit Nos. 5309-07 and -08 boilers shall each not exceed 0.27 lb/MMBTU heat input:

$$Pt = \frac{1.09}{Q^{0.26}} = \frac{1.09}{(29.3+29.3+33.5+33.5+33.5+33.5) \text{ MMBtu}^{0.26}} = \frac{0.2702 \text{ lbs}}{\text{MMBTU}} = \frac{0.27 \text{ lbs}}{\text{MMBTU}};$$

$$Q^{0.26} \quad (192.6 + 10.5 + 10.5) \text{ MMBtu}^{0.26} \quad \text{MMBtu} \quad \text{MMBtu}$$

Compliance Determination:

Compliance with 326 IAC 6-2-1 is shown for boilers, using emissions factors from AP-42, Chapter 1.4, Table 1.4-1:

$$\frac{7.6 \text{ lbs}}{\text{MMCF}} \times \frac{\text{CF}}{940 \text{ Btu}} \times \frac{\text{MMCF}}{1,000,000 \text{ CF}} \times \frac{1,000,000 \text{ Btu}}{\text{MMBtu}} = \frac{0.0081 \text{ lbs}}{\text{MMBtu}}$$

326 IAC 12 (New Source Performance Standards)

326 IAC 12-1-1 incorporates by reference 40 CFR 60. See Federal Rule Applicability for requirements applicable to this source.

Emergency Generators (Emission Units 5309-9 and 5309-10)

Pursuant to the original FESOP, F097-5617-00259, the two (2) emergency generators each shall be limited to operating five hundred (500) hours/12 consecutive month period and total diesel fuel usage shall be limited to 33,050 gallons/12 consecutive month period. This limits NO_x emissions from the emergency generators to 15 tons per year. The following calculations were used to determine allowable fuel limits:

$$\frac{66.1 \text{ gal}}{\text{hr}} \times \frac{500 \text{ hr}}{\text{yr}} = \frac{33,050 \text{ gal}}{\text{yr}}$$

The following calculation was used to determine the NO_x limit at 500 hours of operation per 12 consecutive month period:

$$2 \text{ boilers} \times \frac{9.4 \text{ MMBtu}}{\text{hour}} \times \frac{500 \text{ hours}}{\text{year}} \times \frac{3.2 \text{ lb NO}_x}{\text{MMBtu}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = \frac{15 \text{ tons NO}_x}{\text{year}}$$

Particulate Matter Applicability

Although this source is located in Marion County, these units are not subject to 326 IAC 6-1 (Nonattainment Area Limitations) since the source has potential emissions less than 100 tons per year and actual emissions less than 10 tons per year of particulate matter.

Pursuant to 326 IAC 1-2-59, process weight does not include liquid or gaseous fuels, therefore 326 IAC 6-3-2 does not apply.

Sulfur Dioxide Applicability

The potential to emit of each emergency generator is less than 25 tons per year and less than 10 pounds per hour, therefore 326 IAC 7-1.1 does not apply to these units.

The potential to emit of sulfur dioxide is 0.9 tons per year or 3.76 pounds per hour. See Appendix A calculations for more detailed information.

Soil Pulverizer (Emission Unit 310-1)

This limit shows no change from the Minor Permit Modification MMF097-10523-00259.

Applicability:

Although this source is located in Marion County, these units are not subject to 326 IAC 6-1 (Nonattainment Area Limitations) since the source has potential emissions less than 100 tons per year and actual emissions less than 10 tons per year of particulate matter.

This source is, however, subject to 326 IAC 6-3 (Process Operations) because it is not listed as exempt.

Limit:

326 IAC 6-3-2 (Process Operations)

Pursuant to AF097-10523-00259, issued on January 15, 1999, the particulate matter (PM) from the soil pulverizer shall be limited to 42.5 pounds per hour by the following:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour.}$$

For Dow AgroSciences' soil pulverizer, $P = 40$ tons per hour, therefore, $E = 42.5$ pounds per hour.

Compliance Determination

Based on the AP-42 Emission Factors, the potential emissions of the soil pulverizer are:

$$0.0867 \text{ lb/ton} \times 40 \text{ ton/hr} = 3.468 \text{ pounds per hour.}$$

This potential emission rate demonstrates that the soil pulverizer should be in compliance with 326 IAC 6-3-2 at all times.

Emission Unit 301-DC

This limit shows no change from the First Administrative Amendment 097-14227-00259.

Applicability:

Although this source is located in Marion County, these units are not subject to 326 IAC 6-1 (Nonattainment Area Limitations) since the source has potential emissions less than 100 tons per year and actual emissions less than 10 tons per year of particulate matter.

This source is, however, subject to 326 IAC 6-3 (Process Operations) because it is not listed as exempt.

Limit:

326 IAC 6-3-2 (Process Operations)

Pursuant to the First Administrative Amendment 097-14227-00259, issued on July 31, 2001, the particulate matter (PM) from the research and development facility shall be limited to 2.02 pounds per hour, where $P = 0.35$ tons per hour, by the following:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Testing Requirements

Testing of this facility is not specifically required by this permit. However, this does not preclude testing requirements on this facility under 326 IAC 2-1-4(f) and 326 IAC 2-8-4. Testing is not required because reporting of fuel usage demonstrates compliance with the limits of this permit.

Testing was not specifically required by the previous FESOP issued in 1997, so this reflects no change.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

There were no Compliance Determination Requirements or Compliance Monitoring Requirements in the previous approval. No new Compliance Determination Requirements or Compliance Monitoring Requirements were incorporated into this FESOP.

Conclusion

The operation of this facility shall be subject to the conditions of the attached proposed **FESOP No.: F097-15205-00259**.

Appendix A

Appendix A: Emissions Calculations

Page 1 of 8 TSD App A

Company Name: Dow AgroSciences
Address City IN Zip: 9330 Zionsville Road, Indianapolis, IN 46268
CP: FESOP Renewal
Pit ID: F097-15205-00259

Summary of PTE of Significant and Insignificant Activities Located at Dow Agrosciences
 FESOP No.: F097-15205-00259

Table 1.: Summary of PTE From Significant Activities With FESOP Limitations and Insignificant Activities						
Maximum Potential Emissions w/FESOP Limit, Tons/Yr						
Activities	PM	PM10	SOx	NOx	VOC	CO
Significant Activities						
Boilers >10 MMBtu/hr input Limit: 1408 mmcf/yr	5.35	5.35	0.42	70.44	3.87	59.17
Emergency Generators 3686 hp input each Limit: 66,100 gal diesel/yr (Limit of 500 hr/yr)	0.40	0.20	1.80	15.00	0.40	4.00
Soil Pulverizer	16.070	16.070	0.832	12.220	1.000	2.620
Insignificant Activities	3.601	3.601	0.010	1.335	0.074	1.122
Total	25.42	25.22	3.06	99.00	5.34	66.91

Table 2.: Summary of PTE From Significant Activities (Before FESOP Limitations)						
Maximum Potential Emissions, Tons/Yr						
Significant Activities	PM	PM10	SOx	NOx	VOC	CO
Building 306 Boiler 5309-01	0.96	0.96	0.08	12.58	0.69	10.57
Building 306 Boiler 5309-02	0.96	0.96	0.08	12.58	0.69	10.57
Building 306 Boiler 5309-03	1.09	1.09	0.09	14.39	0.79	12.08
Building 306 Boiler 5309-04	1.09	1.09	0.09	14.39	0.79	12.08
Building 306 Boiler 5309-05	1.09	1.09	0.09	14.39	0.79	12.08
Building 306 Boiler 5309-06	1.09	1.09	0.09	14.39	0.79	12.08
Building 308 Boiler 5309-07	0.30	0.30	0.00	4.50	0.20	3.80
Building 308 Boiler 5309-08	0.30	0.30	0.00	4.50	0.20	3.80
Building 306 Generator	0.20	0.10	0.90	7.50	0.20	2.00
Building 308 Generator	0.20	0.10	0.90	7.50	0.20	2.00
Soil Pulverizer	16.070	16.070	0.832	12.220	1.000	2.620
Total	23.35	23.15	3.15	118.94	6.34	83.68

Table 3.: Summary of PTE From Insignificant Activities						
Maximum Potential Emissions, Tons/Yr						
Insignificant Activities	PM	PM10	SOx	NOx	VOC	CO
Building 302, 303, 305, 310 Furn/Heaters	0.008	0.008	0.001	0.107	0.006	0.090
Building 301 Boiler	0.011	0.011	0.001	0.150	0.008	0.126
Building 304 Boiler A	0.009	0.009	0.001	0.120	0.007	0.101
Building 304 Boiler B	0.009	0.009	0.001	0.120	0.007	0.101
Building 307 Boiler A	0.032	0.032	0.003	0.419	0.023	0.352
Building 307 Boiler B	0.032	0.032	0.003	0.419	0.023	0.352
Research & Development	3.5	3.5	0	0	0	0
Total	3.601	3.601	0.010	1.335	0.074	1.122

Appendix A: Emissions Calculations
Natural Gas Combustion Only
10 < MM BTU/HR <100
Small Industrial Boiler

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Company Name: Dow AgroSciences
Address City IN Zip: 9330 Zionsville Road
CP: FESOP Renewal
Plt ID: F097-15205-00259
Reviewer: AJH
Date: Jan-02
Boiler: Building 306 Boiler 5309-01 and -02, Each

Heat Input Capacity MMBtu/hr	Heat Content Btu/CF	Fuel Thruput MMCF/Yr	Potential Throughput MMCF/yr					
29.3	1020	251.63529	251.64					
				Pollutant				
Emission Factor in lb/MMCF			PM 7.6	PM10 7.6	SO2 0.6	NOx 100.0	VOC 5.5	CO 84.0
Potential Emission in tons/yr each boiler			0.96	0.96	0.08	12.58	0.69	10.57

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Flue gas recirculation = 32

Emission Factors for CO: Uncontrolled = 84, Low NOx Burner = 84, Flue gas recirculation = 84

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations

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Natural Gas Combustion Only**10 < MM BTU/HR <100****Small Industrial Boiler**

Company Name: Dow AgroSciences
Address City IN Zip: 9330 Zionsville Road
CP: FESOP Renewal
Plt ID: F097-15205-00259
Reviewer: AJH
Date: Jan-02
Boiler: Building 306 Boiler 5309-03 thru -06, Each

Heat Input Capacity MMBtu/hr	Heat Content Btu/CF	Fuel Thruput MMCF/Yr	Potential Throughput MMCF/yr						
33.5	1020	287.70588	287.71						
				Pollutant					
Emission Factor in lb/MMCF			PM 7.6	PM10 7.6	SO2 0.6	NOx 100.0	VOC 5.5	CO 84.0	
Potential Emission in tons/yr each boiler			1.09	1.09	0.09	14.39	0.79	12.08	

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Flue gas recirculation = 32

Emission Factors for CO: Uncontrolled = 84, Low NOx Burner = 84, Flue gas recirculation = 84

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations

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Natural Gas Combustion Only**10 < MM BTU/HR <100****Small Industrial Boiler****Company Name: Dow AgroSciences**
Address City IN Zip: 9330 Zionsville Road**CP: FESOP Renewal****Plt ID: F097-15205-00259****Reviewer: AJH****Date: Jan-02****Boiler: Building 308 Boiler 5309-07 and -08, Each**

Heat Input Capacity MMBtu/hr	Heat Content Btu/CF	Fuel Thruput MMCF/Yr	Potential Throughput MMCF/yr						
10.5	1020	90.17647059	90.2						
				Pollutant					
Emission Factor in lb/MMCF			PM 7.6	PM10 7.6	SO2 0.6	NOx 100.0	VOC 5.5	CO 84.0	
Potential Emission in tons/yr each boiler			0.3	0.3	0.0	4.5	0.2	3.8	

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Flue gas recirculation = 32

Emission Factors for CO: Uncontrolled = 84, Low NOx Burner = 84, Flue gas recirculation = 84

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
10 < MM BTU/HR <100
Small Industrial Boiler

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Company Name: Dow AgroSciences
Address City IN Zip: 9330 Zionsville Rd, Indianapolis, IN
Reviewer: ajh
Date: Jan-02

Permit No.: F097-15205

Boiler: All Boilers, Nos.: 5309-01 thru 5309-08, Combined
Fuel input limit

Heat Input Capacity	Heat Content	Fuel Thruput	Potential Throughput					
MMBtu/hr	Btu/CF	MMCF/Yr	MMCF/yr					
0.0	1020	0.00	1408.80					
Emission Factor in lb/MMCF			Pollutant					
			PM	PM10	SO2	NOx	VOC	CO
			7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr each boiler			5.35	5.35	0.42	70.44	3.87	59.17

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Flue gas recirculation = 32

Emission Factors for CO: Uncontrolled = 84, Low NOx Burner = 84, Flue gas recirculation = 84

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Large Stationary Engine
Operating 500 Hours/yr

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Company Name: Dow AgroSciences
City, Indiana: 9330 Zionsville Rd, Indianapolis, IN
Reviewer: ajh
Date: Jan-02

Permit No.: F097-15205-00259
Plt ID: Building 308 Generator

A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity Gallons/hr Btu/gallon S= 0.4 = WEIGHT % SULFUR
MM Btu/hr input 142000

9.4 66.1 HP/hr input= 3686.4

Emission Factor in lb/MMBtu	Pollutant					
	PM 0.1	PM10 0.0573	SO2 0.4 (1.01S)	NOx 3.2	VOC 0.1	CO 0.85
Potential Emission in tons/yr (based upon 500 hrs)	0.2	0.1	0.9	7.5	0.2	2.0

Limit of 33,050 gallon/yr based on 66.1 gal/hr input and 500 hr/yr limit for emergency generators

Methodology

Potential Througput (hp-hr/yr) = hp * 500 hr/yr

Emission Factors are from AP 42 Table 3.4-2 and Table 3.4-5

PM emissions calculated from AP42 (Fifth edition, January 1995), Table 3.4-5, Footnotes c and d.

1 hp-hr = 7000 Btu, AP42 (Fifth edition, January 1995), Table 3.3-2, Footnote a.

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 500 hr/yr / (2,000 lb/ton)

Emission (tons/yr) = [Potential Througput (hp-/500hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

Conversion factor of 3.9275 x 10-4 for BTU to Horsepower/hr from AP-42 (Fifth edition, January 1995), Pg A-12

Appendix A: Emission Calculations
Internal Combustion Engines - Diesel Fuel
Large Stationary Engine
Operating 500 Hours/yr

Page 7 of 8 App A

Company Name: Dow AgroSciences
City, Indiana: 9330 Zionsville Rd, Indianapolis, IN
Reviewer: ajh
Date: Jan-02

Permit No.: F097-15205-00259
Plt ID: Building 308 Generator

A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity Gallons/hr Btu/gallon S= 0.4 = WEIGHT % SULFUR
MM Btu/hr input 142000

9.4 66.1 HP/hr input= 3686.4

Emission Factor in lb/MMBtu	Pollutant					
	PM 0.1	PM10 0.0573	SO2 0.4 (1.01S)	NOx 3.2	VOC 0.1	CO 0.85
Potential Emission in tons/yr (based upon 500 hrs)	0.2	0.1	0.9	7.5	0.2	2.0

Limit of 33,050 gallon/yr based on 66.1 gal/hr input and 500 hr/yr limit for emergency generators

Methodology

Potential Througput (hp-hr/yr) = hp * 500 hr/yr

Emission Factors are from AP 42 Table 3.4-2 and Table 3.4-5

PM emissions calculated from AP42 (Fifth edition, January 1995), Table 3.4-5, Footnotes c and d.

1 hp-hr = 7000 Btu, AP42 (Fifth edition, January 1995), Table 3.3-2, Footnote a.

Emission (tons/yr) = [Heat input rate (MMBtu/hr) x Emission Factor (lb/MMBtu)] * 500 hr/yr / (2,000 lb/ton)

Emission (tons/yr) = [Potential Througput (hp-/500hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

Conversion factor of 3.9275 x 10⁻⁴ for BTU to Horsepower/hr from AP-42 (Fifth edition, January 1995), Pg A-12

Soil Pulverizer

Page 8 of 8 App A

Company Name: Dow AgroSciences
City, Indiana: 9330 Zionsville Rd, Indianapolis, IN
Reviewer: ajh
Date: Jan-02

Permit No.: F097-15205-00259
Plt ID: Soil Pulverizer (#310-1)

Process Emissions Capacity (Tons per year) 40

Emission Factor in lb/MMBtu	Pollutant				
	PM10 0.0867	SO2	NOx	VOC	CO
Potential Emission in tons/yr	15.2				

Engine Emissions Max Output (horsepower) 90

Emission Factor in lb/MMBtu	Pollutant				
	PM10 0.0022	SO2 0.0021	NOx 0.031	VOC 0.0025	CO 0.0067
Potential Emission in tons/yr	0.867	0.828	12.22	0.99	2.6

Process Emissions PM10 Emission Factor Based on AP-42 tables: 11.9-4, 11.19.2-2, 11.12-2, 11.9-2.

Engine Emissions Emission Factors from AP-42 Table 3.3-1.